

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 49

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MASAhide MOHRI, NORIO MATSUDA,
SHINICHIRO TANAKA, YOSHIO UCHIDA,
YOSHINARI SAWABE, HISASHI WATANABE,
and HIROSHI OGAWA

Appeal No. 2000-1868
Application 08/730,217

HEARD: SEPTEMBER 17, 2002

Before WALTZ, KRATZ and TIMM, Administrative Patent Judges.

WALTZ, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the examiner's final rejection of claims 1, 4 through 7, 9 through 13, 18 and 19, which are the only claims remaining in this application (Brief, page 2).¹ We have jurisdiction pursuant to 35 U.S.C. § 134.

¹ The amendment dated Apr. 19, 1999, Paper No. 38, was refused entry by the examiner in an Advisory Action dated May 4, 1999, Paper No. 39 (Brief, page 2).

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According to appellants, the invention is directed to a process for producing alpha alumina powder having a regulated particle size, particle shape, a narrow particle size distribution and a low halogen content (Brief, pages 2-7). A copy of illustrative independent claim 1 is attached as an Appendix to this decision.

In addition to using applications S.N. 08/606,679, S.N. 08/907,058, and S.N. 08/922,478 as the basis for obviousness-type double patenting rejections, the examiner relies upon the following references as evidence of obviousness:

Hamner et al. (Hamner)	3,961,036	Jun. 01, 1976
Andrews et al. (Andrews)	4,548,795	Oct. 22, 1985
Cambridge et al. (Cambridge)	4,634,581	Jan. 06, 1987
Misra	4,822,592	Apr. 18, 1989
Sucech et al. (Sucech)	5,149,520	Sep. 22, 1992
Lindsay et al. (Lindsay) (Canadian Patent)	678,220	Jan. 14, 1964
Yamada et al. (JP '825) (published Japanese Kokai application) ²	60-131825	Jul. 13, 1985

The following rejections are before us in this appeal:

(1) the claims on appeal stand rejected under 35 U.S.C. § 103(a) as unpatentable over JP '825 or Misra or Hamner or

² We rely upon a full English translation of this document, now made of record.

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Lindsay or Sucech, each taken with Cambridge or Andrews (Answer, pages 3-7); and

(2) the claims on appeal also stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting over claims 1-9, 25-27, and 29-52 of copending application S.N. 08/606,679,³ or claims 1-14 of copending application S.N. 08/922,478, or claims 1-20 of copending application S.N. 08/907,058, each taken with Cambridge or Andrews (Answer, pages 8-10).⁴

We reverse all of the rejections on appeal essentially for the reasons stated in the Brief, Reply Brief, and those reasons set forth below.

OPINION

We first note that the basis of one rejection on appeal is application S.N. 08/907,058 (Answer, page 10), which is now abandoned according to Patent & Trademark Office records (see also the Brief, page 9). Accordingly, we summarily reverse the

³ We note that this application has now matured into U.S. Patent No. 5,935,550.

⁴ For reasons of judicial economy, we have merged the eight separate rejections of the examiner (Answer, pages 3-10) into two rejections since each merged rejection involves the same basis, the same claims and the same secondary references.

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examiner's rejection for obviousness-type double patenting over this application since this judicially created doctrine was created to prevent undue extension of a patent term, which is now impossible since S.N. 08/907,058 is abandoned.

Even assuming *arguendo* that the examiner's factual findings from each primary reference (and application) are correct, we cannot sustain the rejections on appeal since we disagree with the examiner's factual findings and conclusions of law based on the secondary references applied in every rejection on appeal, namely Cambridge and Andrews.

The examiner finds that "Cambridge and Andrews each teach heating alumina in air to remove chlorine from the alumina (cols. 3 and 7; and col. 7, respectively)." Answer, page 3 (see also the Answer, each of pages 4-10). The examiner combines these references with each primary reference or application to show the obviousness of the claimed process step where halogen is removed by heating the alpha alumina powder containing the halogen in an atmosphere of air or inert gas or at reduced pressure at a specified temperature (e.g., see claims 1 and 18; Answer, page 3). We do not agree with the examiner's analysis of the Cambridge and Andrews references. Furthermore, we determine that

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the examiner has failed to provide any convincing evidence or reasoning of a motivation to combine the references as proposed.

Andrews relates to the treatment of aluminous materials containing iron for the purpose of reducing the iron content by the leaching action of hydrochloric acid and metal chlorides (col. 1, ll. 6-9; col. 3, l. 41-col. 4, l. 8). Andrews teaches recovery of chloride values for recycling by heating a recovered mixture of aluminum chloride hexahydrate and basic aluminum chloride hydrates at temperatures in excess of 800°C. to remove all traces of chloride from the chloride hydrate crystals and to complete the alpha alumina transition (col. 7, ll. 15-39).

Since Andrews teaches that alpha alumina is formed at temperatures in excess of 800°C., the examiner concludes that this disclosure suggests "that alpha alumina is heated/calcined at these temperatures" (Answer, page 12). However, as correctly argued by appellants (Brief, page 17), Andrews merely forms alpha alumina and does not disclose or suggest heating alpha alumina powder *containing halogen*, as is required by the claimed subject matter on appeal (e.g., see claim 1).

Cambridge is directed to a process for forming high purity alumina from Bayer Process alumina trihydrate, wherein the hydrated alumina is reacted with concentrated hydrochloric acid

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to cause partial or complete conversion to aluminum chloride hexahydrate (ACH) (abstract; col. 2, l. 62-col. 3, l. 9). Cambridge teaches calcining, preferably in two steps, of the recovered ACH and any unreacted hydrated alumina to produce a lower impurity crystalline alumina (col. 3, ll. 18-42).

The examiner finds that col. 7, ll. 4-7, of Cambridge teaches that alpha alumina is formed at higher calcination temperatures (Answer, page 11). From this finding, the examiner concludes that there is a suggestion that "there is in fact at least some alpha alumina which is being calcined between 800 and 1200°C." *Id.* However, as discussed above, the claimed subject matter on appeal requires that the alpha alumina powder *containing the halogen* is heated to remove the halogen (e.g., see claim 1 on appeal). The examiner has failed to show that this limitation is disclosed or suggested by Cambridge.

Additionally, on this record the examiner has failed to provide any convincing motivation, reasoning, or suggestion for combining the references as proposed. For each prior art rejection, the examiner has merely set forth the conclusory statement that it would have been obvious to heat the product of the primary references "to remove halogen because this would provide a purer product which is more marketable" (e.g., Answer,

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page 7). The examiner has not referred to any disclosure, teaching or other evidence in the record that would support this statement. See *In re Lee*, 277 F.3d 1338, 1343, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002). Furthermore, mere broad statements as to the motivation to combine references, such as "they are analogous processes" (Answer, page 12), are not a sufficient showing of the motivation to combine these references. See *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999). The showing of a motivation or suggestion to combine references must be clear and particular for each rejection. See *Dembiczak*, *supra*. We also note that the examiner has not replied to many of appellants' arguments in the Brief, especially concerning the obviousness-type double patenting rejections (see the Reply Brief, pages 3, 7, 8, 10, 12, 14 and 15).

For the foregoing reasons and those set forth in the Brief and Reply Brief, we determine that the examiner has not established a *prima facie* case of obviousness for either the rejections based on section 103(a) or those based on the judicially created doctrine of obviousness-type double patenting. Accordingly, all of the rejections on appeal are reversed.

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The decision of the examiner is reversed.

REVERSED

THOMAS A. WALTZ)	
Administrative Patent Judge))	BOARD OF PATENT
)	
PETER F. KRATZ)	APPEALS AND
Administrative Patent Judge))	INTERFERENCES
)	
CATHERINE TIMM)	
Administrative Patent Judge))	

TAW:dal

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APPENDIX

1. A method for producing α -alumina powder having a number average particle size of 0.1 to 30 μm and a halogen content of 10 ppm or less comprising the steps of:

(i) calcining, in a calcining system, a starting material consisting of:

(a) at least one additive, and

(b) transition alumina, an alumina compound or mixtures thereof;

in a halogen-containing atmosphere which comprises at least one member selected from the group consisting of a hydrogen chloride gas, a chlorine gas, and a mixture of a chlorine gas and steam; wherein said at least one hydrogen chloride gas, chlorine gas or chlorine gas in said mixture of chlorine gas and steam is present in an amount of at least 1% by volume based on the total volume in the atmosphere; and (ii) removing halogen from said calcined material;

wherein said at least one additive is selected from the group consisting of a seed crystal and a shape-regulating agent, and

wherein said halogen is removed by one of the following methods:

a) a method in which α -alumina powder containing the halogen is heated in an atmosphere of air at a temperature of from 900°C to 1000°C; or

c) a method in which α -alumina powder containing the halogen is heated under reduced pressure of 0.1 Torr or less at a temperature of from 400°C to 1000°C.